

FIRE PROTECTION PLAN

Ocean Breeze Ranch

PDS2015-TM-5615

North County Fire Protection District
San Diego County

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EXECUTIVE SUMMARY

The Ocean Breeze Ranch (OBR) development is a planned residential community located in north San Diego County, in the unincorporated community of Bonsall. The Project site is located west of Interstate 15, south of State Highway 76 in the San Luis Rey River valley. The property consists of 1,402.52 acres on a portion of what was previously the Vessels Family property. The proposed project will consist of 396 residential lots that vary in size from 0.10 acre to a single estate lot of 24.24 acres. In addition, a development will include an existing privately owned and operated equestrian facility. A substantial portion of the property, comprising over half the site (833.85 acres), will be preserved as biological open space. The subject property is made up of a patch work of landscapes comprised of native vegetation, non-native grasslands, fallow orchards, thriving orchards, row crops, riparian areas and oak woodland.

The Project is located within an area the State has designated as a Very High Fire Hazard Severity Zone (VHFHSZ). This designation reflects past fire history combined with extreme fire weather conditions that prevail during the dry summer/fall months in San Diego County. The presence of large tracts of Coastal sage scrub/buckwheat vegetation within and surrounding the Project indicates that the threat of wildland fire is an ever present risk to public safety. The Project was burned in the December 2017 Lilac Fire.

1.0 INTRODUCTION

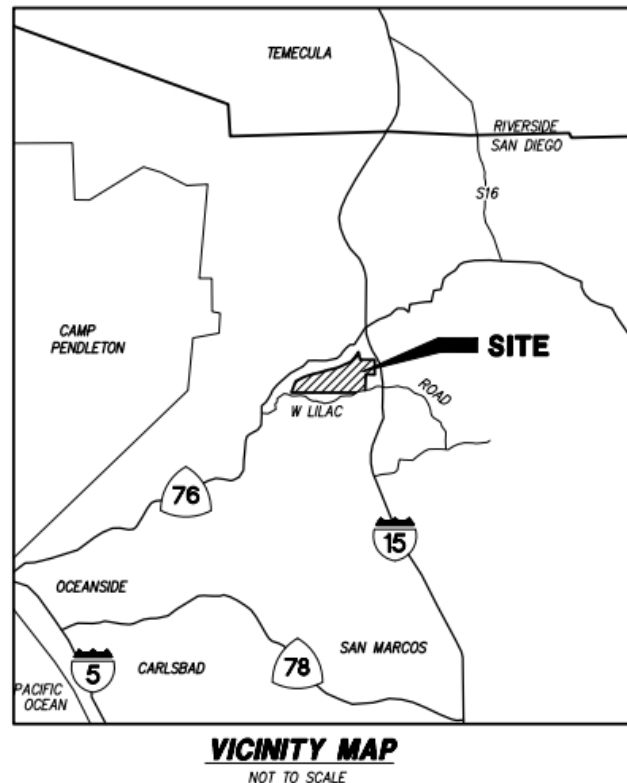
This Fire Protection Plan (FPP) has been prepared for the Ocean Breeze Ranch development (hereafter referred to as Project). The purpose of the FPP is to evaluate the Project's potential wildland fire hazard and the potential fire risk to private property. Further, this FPP details the methods proposed to minimize potential fire risk. This FPP also evaluated the consistency of the proposed project with applicable fire protection regulations. As part of the assessment, the plan has considered the property location, topography, geology, combustible vegetation (fuel types), climatic conditions, and fire history. The plan addresses water supply, access (including secondary/emergency access where applicable), structural ignitability and ignition resistive building features, fire protection systems and equipment, impacts to existing emergency services, defensible space, and vegetation management. The plan identifies areas for hazardous fuel reduction treatments and recommends the types and methods of such treatment. The plan recommends measures that property owners will take to reduce the probability of ignition of structures throughout the development addressed by this plan.

An initial field visit was conducted on September 11, 2015, to evaluate lot layout, primary and secondary access road locations, hazardous fuels and topography. Additional field evaluations occurred by the project's fire protection planning team throughout 2016 as necessary to collect information and familiarize with the site. The North County Fire

Protection District (NCFPD) has met on site on several occasions with a representative from the County Fire Authority, the project planning team and the fire consultant.

1.1 Project Location

The Ocean Breeze Ranch development is located at 5820 West Lilac Road, Bonsall, California. General location is east of Camino Del Rey and west of Old Highway 395 and Interstate 15. The project site is south of State Highway 76 and the San Luis Rey River. The property is situated on what was formerly known as the Vessels Ranch.



1.2 Project Description

The Ocean Breeze Ranch development will be a residential community located in north San Diego County, in the unincorporated community of Bonsall. The Project development consists of 1,402.52 acres contained in three existing, legal parcels which comprise the Ocean Breeze Ranch property. The proposed project will consist of 396 residential lots and a separate, privately owned and operated equestrian facility.

The residential portion of the project will include three (3) planning areas (PA) and a single 22.5 acre lot defined as follows:

- PA-1 consists of 144 lots with 5,000 sq ft minimums.
- PA-2 consists of 237 lots with 4,500 sq ft minimums.
- PA-3 consists of 14 lots with 5 acre minimums.

- One Hillside Estate lot of 24.24 acres will be provided next to the Sullivan Middle School off West Lilac Road (See Appendix A – Site Plan)

The project will include public streets including two primary loop roads (See APPENDIX A - Road A and Road B) connecting at two locations along West Lilac Road. Public streets will be proposed for PA-1 and PA-2, and gated private streets within PA-3. Both Roads A and B are looped roads, and in each case the road connects back to the same neighborhood access road. Without additional means of emergency ingress or egress, the looped roads by themselves would not provide sufficient emergency routes for public safety. For this reason, the project proposes to also construct Dulin Road connecting from PA1 to the property's eastern-most boundary. This access route will afford residents and emergency vehicles an alternate route, in the event evacuation or access is not possible in the project's western areas.

The project will also include seven (7) public or private parks totaling 15.9 acres. These parks will connect to trails for the proposed community as well as neighboring vicinity, and to the future *San Luis Rey Trail* which will be constructed by the County of San Diego along the northern boundary.

The OBR project will be constructed in five (5) phases (See APPENDIX E). Phase 1 and 2 will complete the build out of PA-1 and the Hillside Estate Parcel. Phase 3 and 4 will complete the build out of PA-2 and improve portions of West Lilac Road. Phase 5 will complete PA-3, the estate lots (See Appendix E – Phasing Exhibit).

The equestrian portion of the project includes the current equestrian facility. The facility includes barns, indoor and outdoor stables, hay storage, veterinary buildings, an office and housing for ranch personnel. The total area of the equestrian ranch is 203.15 acres. Access to the equestrian facility will be provided using a private entrance road with a gate, connecting to Road A in PA-2.

1.3 Environmental Setting

The property includes a variety of terrain, from relatively flat alluvial plain near the San Luis Rey River along the northern boundary to sloping hillsides near the property's southern boundary along West Lilac Road. Elevations at the northern boundary vary from 175' MSL at the northwest, to 840' at the northeast. Elevations increase progressively to the south, with ridgelines at or near the southern boundary having elevations ranging from 367 to the southwest to 725 at the southeast.

The site has been used as a horse breeding and training farm for several decades, dating to the purchase of the property by the Vessels Family in 1981. Large portions of the property's lower elevations have been used over many decades, first as a grazing area for cattle beginning in the late 1800's, and subsequently as pastures for horses. Portions of the property have also been utilized for agriculture. Extensive areas along the hillsides have been farmed for avocados for many decades. In

addition, portions of the property have been converted from pastures to row crops such as tomatoes over the past several years.

A substantial portion of the property (833.85 acres), comprising over half the property will be preserved as biological open space, which will protect these lands into perpetuity. Habitat to be protected includes significant acres of Diegan Coastal Sage scrub habitat, Coast live oak woodland, and Southern willow Scrub.



Photo 1. View of the Ocean Breeze Ranch project perimeter.

2.0 GUIDELINES FOR THE DETERMINATION OF SIGNIFICANCE

These Guidelines for Determining Significance for Wildland Fire Protection shall be used by County staff for the review of discretionary projects and environmental documents pursuant to the California Environmental Quality Act (CEQA). These Guidelines present a range of quantitative, qualitative, and performance levels for particular environmental effects. The intent of these Guidelines is to provide a consistent, objective and predictable evaluation of significant effects.

1. Is the Project Compliant with Existing Wildland Fire Regulations?

The Fire Protection Plan (FPP) prepared for the project will ensure compliance with the State and County fire codes and ordinances for new construction in areas designated as *Very High Fire Hazard Severity Zones*. The FPP will ensure the building codes are followed to allow the structures to resist ignition from a wildland fire and develop adequate fuel modification around the structures to meet County and State fire code requirements. The Project would comply with applicable fire and building codes and would include other fire protection measures such as a 100' fuel

modification zone around all structures, brushing along all roadways, redundant water supply systems and adequate fire/emergency access.

2. Will the Project Be Consistent with the Recommendations in the Fire Protection Plan?

The FPP will conduct the required fire behavior modeling to assess the impacts from wildland fire to ensure relatively safe building construction within high fire hazard areas. If some portions of the project cannot meet the requirements for fuel modification, mitigations will be developed to meet equivalency with the fire code.

3. Will the Project have adequate Fire Services available in Order to Provide Sufficient emergency response in the event of an emergency?

The proponent obtained from NCFPD, the local fire agency with jurisdiction, a signed Project Facility Availability form (DPLU Form #399F) prior to submitting the project application to the County. The project is located within the jurisdiction of the NCFPD which has confirmed it can provide fire service to the project. This project, along with all other new development, will have a cumulative impact on the emergency services for this community. When completed, the Project would result in a development that is less susceptible to loss from threat than the surrounding landscapes and provide improved Fire/EMS response.

4. Would the project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

The Project will be served by the Rainbow Municipal Water District and sufficient water supplies will be available to serve the Project from existing resources. A copy of the Water Service Availability Form 399W for the Project signed by RMWD is attached to this FPP. The Water District has indicated that service can be provided to the project within the next five years based on facility plans of the district. Additional information is available on water supply requirements in more detail in Section 4.3 of this FPP.

3.0 ANTICIPATED FIRE BEHAVIOR IN THE VICINITY

A majority of the OBR property is located within an area designated as “Very High Fire Hazard Severity Zone”. The reminder of the area is listed as a moderate fire severity zone due to the past agricultural practices with grazing pastures, orchards and row crop farming. The high fire hazard designation indicates that there are large areas of volatile fuels that have the potential to increase the risk of a wildfire in the area. Fortunately, current agricultural land uses on the property have interrupted and converted native fuels to a lower flammability/intensity. Several scenarios were evaluated to determine the

potential fire behavior of a wildland fire that might occur in the vicinity of the Ocean Breeze Ranch Project. Fire Behavior calculations were used to assist in the determination of suitable fuel modification requirements and adequate vegetation treatment maintenance.

3.1 On-site Conditions

The subject property encompasses approximately 1,405.52 acres of which over 60% of the existing vegetation is considered a high fire hazard fuel bed. The most hazardous fuel type on the property is the Coastal sage scrub/buckwheat (Fuel Model SCAL 18). It occupies approximately 507 acres of the native vegetation surveyed on the property. Other vegetation types on the property includes non-native grasslands, fallow orchards, oak and eucalyptus woodland, and willow scrub riparian areas. While the development has been designed to primarily sit within the disturbed/cultivated sites on the property, the Diegan Coastal Sage Scrub habitat will be set aside as preserved biological open space as part of a County mitigation ordinance. The largest portion of this fuel type is located at the eastern third of the property (See attached Vegetation Exhibit – APPENDIX B). This area poses the greatest wildfire risk to the development. The Highway Fire in 2014 started off Interstate-15 and burned west onto the subject property. The fire burned over 700 acres before suppression forces stopped its spread to the surrounding communities. Fortunately, no structures were lost. Most recently, the Lilac Fire in December 2017, burned 4,100 acres and destroyed 157 structures (See Appendix C – Lilac Fire Map).

Coastal sage scrub plant community is found throughout southern California and is considered a very volatile fuel bed that can exhibit rapid rates of spread under gusty wind conditions. This vegetation tends to dry out quickly during the early summer months, promoting a light flashy fuel bed with lots of dead material that is difficult to control even under light-moderate wind conditions (5-10 MPH). For fire departments to evaluate the effectiveness of fire protection measures applied to developments in the wildland-urban interface, they require fire behavior analysis that reflects the most extreme historical weather conditions possible. For north San Diego County, this would mean dry summer/late fall conditions with high temperatures (90+degrees), low humidity (<25%), gusty winds (30-60 MPH northeast winds) and low live-fuel moistures (50%). Because fire modeling under these conditions forecasts potential extreme fire behavior (flames lengths of over 45 feet with rapid rates of spread), it is important that the residential community apply adequate fire protection measures to counter the expected fire threat. The applied measures would include providing brush clearance around structures of 100', ignition-resistant construction, and adequate emergency access.

3.2 Off-site Conditions

Fuel conditions off-site vary from riverbed vegetation along the San Luis Rey River to the north and west, to the fuel-modified lands in the semi-rural residential communities to the south and east along West Lilac Road. To the north, the Project will be buffered from wildland fires coming off the river bed by the wide open green pastures associated with an existing equestrian facility. To the west of the Ranch, open areas of native vegetation that border the development can fuel fires that threaten the development under southwest wind conditions. The Project will incorporate 100' fuel modification zones around all planning areas to counter this wildland fire threat as required by the fire code and enhancing fire protection.

4.0 ANALYSIS OF PROJECT EFFECTS

4.1 Adequate Emergency Services

North County Fire Protection District (NCFPD) is the jurisdictional fire agency for the area. The Project is situated between two NCFPD fire stations. The primary fire station is NCFPD Station #5 at 5906 Olive Hill Drive in Bonsall. It is located 2.0 Miles west of the Project. Its access into PA-1-2-3 is via Olive Hill Road to West Lilac Road. The second station is NCFPD Fire Station #4 at 4375 Pala Mesa Drive. It is located 3.0 miles north of the project. An analysis of the travel response times for both fire stations indicate they are within the minimum travel times required by Table S-1, County of San Diego, General Plan, and Chapter 7 Safety Element. Planning Areas PA-1 & 2 consist of lots ranging from 8.7 to 9.7 dwelling units/acre and therefore must meet the 5 minute travel times. The distance from Station #5 to both PA-1 and PA-2 would allow emergency vehicles to meet the 5 minute travel time. PA-3 contains lots with a minimum of five (5) acres, with travel time estimated at 7 minutes. For access to the Hillside Estate parcel, Station #4 is 4.5 miles away with an estimated travel time of 8 minutes. The proposed development meets the travel time requirements of the Safety Element of the San Diego County General Plan. Travel times from the nearest fire stations were calculated using a 20 mph design speed on existing roads to reach the project site, and proposed roads within the proposed project. The current per capita call volume for NCFPD is approximately 110 per 1,000 residents. Estimating 3.2 occupants per residence an increased population of 1,267 can be anticipated from this development. The anticipated call volume would be 139 calls per year or 12 calls per month, this increase in not considered a significant impact to NCFPD.

Other fire agencies outside the NCFPD that can also provide emergency responses include CAL FIRE Stations 15 (Miller Station) and Station 10 (Red Mountain), and the Deer Springs Fire Protection District, Stations 11 and 12. Emergency services are provided via contract by CAL FIRE (California Department of Forestry and Fire Protection) and the Deer Springs Fire Protection District. An Automatic Aid Agreement

exists between Deer Springs Fire Protection District and NCFPD to provide a response upon request as part of the County closest resources/drop boundary agreement.

Prior to bringing combustible materials onto the site, utilities shall be in place, fire hydrants operational, and an approved all-weather roadway in place and fuel modifications established and approved. Phasing for issuance of building permits may be proposed by the Project Applicant; any such proposed phasing must be submitted and approved by NCFPD prior to issuance of building permits.

4.2 Fire Apparatus Access

The Project will be required to comply with the following standard fire & life safety requirements:

4.2a Fire apparatus access roads that are public or private roads which are provided or improved as a result of a Tentative Map, Tentative Parcel Map or a Major/Minor Use Permit shall have the dimensions as set forth by the County of San Diego Standards for Public and Private Roads.

4.2b Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. Fire lanes will be properly identified and the HOA will be responsible for enforcing parking regulations on private roads.

4.2c All fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

4.2d The standard cross-slope shall be 2 percent; minimum cross-slope shall be 1 percent; maximum cross-slope shall be 5 percent.

4.2e Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus not less than 75,000 lbs. and shall be provided with an approved paved surface so as to provide all-weather driving capabilities. The paving and sub-base shall be installed to the standards specified in the County of San Diego Parking Design Manual.

4.2f A residential driveway constructed of 3½" Portland cement concrete may be installed on any slope up to 20% provided that slopes over 15% have a deep broom finish perpendicular to the direction of travel to enhance traction.

4.2g The horizontal inside radius of a fire apparatus access road shall comply with the County public and private road standards approved by the Board of Supervisors. The horizontal inside radius for a private residential driveway shall be a minimum of 28 feet, as measured on the inside edge of the improvement width or as approved by the fire code

official. The length of vertical curves of fire apparatus access roads shall not be less than 100 feet, or as approved by the fire code official.

4.2h All dead-end fire access roads in excess of 150 feet in length shall be provided with approved provisions for turning around emergency apparatus. A cul-de-sac shall be provided in residential areas where the access roadway serves more than 2 structures. The minimum unobstructed radius width for a cul-de-sac in a residential area shall be 36 feet paved, 40 feet graded.

4.2i Where a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HB-17. Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits and clearance limitations shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the fire code official.

4.2j The gradient for a fire apparatus access roadway shall not exceed 15.0%. The fire code official may allow roadway grades up to 20.0% provided that the roadway surface is constructed of 3 ½ inches of Portland cement concrete having a deep broom finish perpendicular to the direction of travel or another approved surface to enhance traction. The angle of departure and angle of approach of a fire access roadway shall not exceed 7 degrees (12 percent).

4.2k According to the County of San Diego Consolidated Code and the California Code of Regulations, Title 14, the maximum length of a dead-end road, including all dead-end roads accessed from that dead-end road, shall not exceed the following cumulative lengths, regardless of the number of parcels served. A dead -end road includes; A road that has only one point of vehicular ingress/egress, including cul-de-sacs and looped roads.

ZONING FOR PARCEL SERVED BY DEAD-END ROAD(s)	CUMULATIVE LENGTH OF DEAD-END ROAD(s)
Parcels zoned for less than 1 acre	800 feet
Parcels zoned for 1 acre to 4.99 acres	1,320 feet
Parcels zoned for 5 acres to 19.99 acres	2,640 feet
Parcels zoned for 20 acres or larger	5,280 feet

4.2l The Dulin Road extension will serve as secondary access for all planning areas and shall mitigate for dead-end road lengths that exceed maximum allowable lengths. Dulin Road will also serve as an emergency egress for other nearby areas providing for greater fire safety.

4.2m During Phase 1 of the OBR development, the first 50 homes will be constructed in Planning Area 1 (PA-1) and a portion of Road A will be built, connecting to West Lilac Road. Road A will be improved as a paved public street to both connections of Road A and Road B and to the future entrance of the Equestrian facility on Road A. This segment of Road A will provide access to and from West Lilac, from the interior streets of PA-1. Emergency egress and ingress for both Phase 1 (PA-1) and the equestrian facility will be on this portion of Road A, connecting to West Lilac Road (See APPENDIX A). The Hillside Estate parcel would also be part of Phase 1 with access provided off West Lilac Road near the Sullivan School.

Phase 2 will consist of building permits for the 51st through the 100th home in PA1. As the OBR development begins construction of Phase 2, a secondary access route will be required. Prior to the issuance of the building permit for the 51st home, the project must construct either a) the full length of Dulin Road to its eastern termination at the project's eastern boundary, or b) the Interim Evacuation Route (IER), as more fully described in Section 4.21 below.

The IER shall consist of:

- (i) a portion of the newly constructed Road A,
- (ii) selected roads through the Equestrian Facility, and
- (iii) an eastern segment of newly-constructed Dulin Road.

The IER shall only be used for secondary access for a period of no greater than three (3) years after the first permit is issued.

The IER is illustrated in APPENDIX E. IER shall be permitted to have access gates, subject to the restrictions for gates as listed in Section 4.2.

The IER proposes the use of selected existing roadways within the equestrian facility, to provide an emergency evacuation route that connects to Dulin Road to the east. These roadways will be improved to meet the County and NCFPD standards for supporting a 75,000 lb fire apparatus. Hardening this road surface will be accomplished using a minimum of 12" of "soil cement".

4.2o Fire access to the Hillside Estate parcel is by way of West Lilac Road. One entry point is planned to access this parcel just east of the Sullivan Middle School. The access road to this parcel is a dead-end road and does not exceed 5,280 feet in length, therefore this complies with the Dead End Road Length requirement for a lot of 20-acres or larger (Section 503.1.3 County CFC). Where parcels are zoned 5 acres or larger, turnarounds shall be provided at a maximum of 1,320 foot intervals.

4.2p A road maintenance agreement will be required by the County of San Diego, to ensure long-term maintenance by the HOA of all private roads.

4.2q Within PA-3, Dulin Road becomes a private road for residents only with three security gates to limit public access. A total of three (3) gates are proposed for PA-3 (See APPENDIX D – Evacuation Plan). All gates shall provide for unrestricted egress from inside PA-3. The gate which is planned to be installed on the connector road between PA 1 and PA-3 will include an approved turnaround on the PA 1 side (See APPENDIX A for gate locations). This gate shall include a gate access system satisfactory to the NCFPD, to allow eastbound emergency evacuation for residents of PA-1 and PA-2 in the event of an emergency requiring the use of Dulin Road. Gate installation shall comply with the requirements listed in Section 503.6 – Security Gates, of the 2017 County Consolidated Fire Code, including opticom activation, and manual activation by Knox Key, and battery back-up power providing continued use in the event of a power failure. The security gates for the Project shall not be installed without prior approval of the NCFPD fire official.

4.2r Maintenance of the security gates will be the responsibility of the Ocean Breeze Ranch HOA.

4.2s The project will be required to comply with the following requirements regarding access gates.

- 1) An automatic gate across a fire access roadway or driveway shall be equipped with an approved emergency key-operated switch overriding all command functions and opening the gate.
- 2) A gate accessing more than four residences or residential lots or a gate accessing hazardous institutional, educational or assembly occupancy group structure, shall also be equipped with an approved emergency traffic control-activating strobe light sensor or other device approved by the fire code official, which will activate the gate on the approach of emergency apparatus.
- 3) An automatic gate shall be provided with a battery back-up or manual mechanical disconnect in case of power failure.
- 4) An automatic gate shall meet fire department policies deemed necessary by the fire code official for rapid, reliable access.
- 5) Where this section requires an approved key-operated switch, it may be dual-keyed or equipped with dual switches provided to facilitate access by law enforcement personnel.
- 6) All gates providing access from a road to a driveway shall be located a minimum of 30 feet from the nearest edge of the roadway and shall be at least two feet wider than the width of the traffic lane(s) serving the gate.
- 7) Electric gate openers, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F2200.

4.3 Water Supply

Water is supplied by the Rainbow Municipal Water District. A second source of water may be provided with water line running from Dulin Road out to Rancho Monserate. A copy of the Water Service Availability form (399W) for the Project is attached in Appendix E. Fire flows at mains in wildland areas for new developments must be a minimum of 2500 GPM, unless reduced by the NCFPD fire official. Fire hydrant locations shall be approved by NCFPD. A qualified contractor shall verify fire flow prior to the start of construction materials being on site. All structures shall have interior sprinkler systems installed according to NFPA 13D 2013 Edition as amended by NCFPD. The developer shall install a redundant or looped water supply with a minimum of 2500 GPM in the main and 1500 GPM at the hydrant to be certified by the water purveyor.

4.4 Ignition-Resistant Construction & Fire Protection Systems

The Project is planned for 396 single family dwellings, of which 381 will be on small lot sizes from 4,500 sf. to 5,000 sf., 14 lots of minimum 5-acres and one estate lot at 24.2-acres in size. All structures within the development site shall meet all construction standards for building in high fire hazard areas to the satisfaction of the NCFPD and County Building Division. Design and construction shall meet the requirements listed in the 2016 Edition of the California Fire and Building Codes, with special adherence to Chapter 7A, and the 2016 Edition of the California Residential Code section R327, with other local amendments/ordinances adopted by NCFPD.

Automatic interior fire sprinklers shall be installed in all structures according to the National Fire Protection Association (NFPA) 13D 2013 edition - Standard for the Installation of Sprinkler Systems in One and Two-family Homes and Manufactured Homes, as amended by NCFPD. All accessory structures built within the 100' BMZ such as decks, balconies, patios, covers, gazebos and fences shall be built from non-combustible or ignition-resistant materials. The homeowner(s) are not restricted from having concrete patios, concrete walkways or swimming pools within the Vegetation Modification Zones in compliance with other codes. Construction or building permits shall not be issued until the fire code official inspects and approves required vegetation clearance, fire apparatus access and water supply for the construction site. The issuance of building permits with regard to these requirements shall be in accordance with NCFPD.

Buildings and structures shall be setback a minimum of 100 feet from any property line adjacent a national forest, state park or open space preserve.

Within PA3, single-story structures shall be setback a minimum 15 feet horizontally from top of slope to the farthest projection from a roof. A single-story structure shall be less than 12 feet above grade. A two-story structure shall be setback a minimum of 30 feet horizontally from top of slope to the farthest projection from a roof. Structures greater than two stories may require a greater setback when the slope is greater than 2 to 1.

4.5 Fire Fuel Assessment

The Project is located within an area designated by the State as a Very High Fire Hazard Severity Zone. As stated earlier in the FPP, over 60% of the vegetation in the Project is considered a moderate to high wildland fire threat based on fuel loading and fuel type. A majority of the area within the project was burned in the 2017 Lilac Fire and is currently in a state of recovery. The most volatile fuel type found within and around the Project is Coastal sage scrub combined with areas of non-native grassland, oak woodland, and fallow orchards with grass understory. The fallow orchards are designated to be removed by the developer. Most of the development is slated to occur on previously disturbed areas such as row crop fields, pastureland, and orchards. The eastern and southern portion of the Project will be set aside as a biological open space to preserve some prime Diegan Coastal sage scrub habitat. This area provides a continuous uninterrupted fuel bed from Old Highway 395 to the west side of the Project. Fire behavior predictions using the BehavePlus 5.0.5 program, estimates flame lengths of up to 43 feet during a 60-MPH northeast wind event. The fuel modification zones planned for this area will have to be designed and implemented based on expected fire behavior, to provide adequate fire protection to the community.

The other potential wildland fire threat lies in the western portion of the Project west of PA-1 & 2. Here, coastal sage scrub fuel type exists both on and off-site. Under a dry southwesterly wind, a wildfire could potentially threaten the structures and access roads into the Project. Fire behavior predictions using the BehavePlus 5.0.5 program, estimates flame lengths of up to 20 feet during 30-MPH southwest wind event. Further detail on fire behavior predictions is covered in Section 4.6 below.



Photo 2. View of mixed vegetation community found on-site of the Project.

4.6 Fire Behavior Modeling

The BehavePlus 5.0.5 Fire Behavior Prediction and Fuel Modeling System by Patricia L. Andrews and Collin D. Bevins is one of the best systematic methods for predicting wildland fire behavior. The BehavePlus fire behavior computer modeling system was developed by USDA–Forest Service research scientists at the Intermountain Forest Fire Laboratory, Missoula, Montana, and is utilized by wildland fire experts nationwide. Because the model was designed to predict the spread of a fire, the fire model describes the fire behavior only within the flaming front. The results of the modeling calculations are summarized on page 12.

The primary driving force in the fire behavior calculations is the dead fuel, less than one-fourth inch in diameter. These are the fine fuels that carry the fire. Fuels larger than 1/4-inch contribute to fire intensity, but not necessarily to fire spread. The BehavePlus 5.0.5 fire model describes a wildfire spreading through surface fuels, which are the burnable materials within six (6') feet of the ground and contiguous to the ground. Regardless of the limitations expressed, experienced wildland fire managers can use the BehavePlus 5.0.5 modeling system to project the expected fire intensity (expressed as Btu/ft/sec), rate-of-spread (feet/minute) and flame lengths (feet) with a reasonable degree of certainty for use in Fire Protection Planning purposes. Of these three fire behavior projected flame length is the most critical in determining structure protection requirements.

The ***FIREWISE 2000, Inc.*** evaluation team used the computer based BehavePlus 5.0.5 Fire Behavior Prediction Model to make the fire behavior projections for the hazardous vegetative fuels on the areas in proximity to the proposed site for the Ocean Breeze Ranch development (See APPENDIX C for actual calculations). Two (2) worst case fire scenarios are displayed based on 'worst case' fire weather assumptions for the project area. Each fire scenario displays the expected Rate of Fire Spread (expressed in feet per minute), Fire Line Intensity (expressed in BTU's/foot/sec, and Flame Length (expressed in feet). These fire behavior parameters are calculated for the following scenarios: 1) untreated fuels in a worst case scenario under a northeast Santa Ana wind event in coastal sage scrub fuel model, 2) treated fuels in the fuel modification zones in late fire season northeast Santa Ana winds, 3) untreated fuels in above average 30 MPH southwest wind conditions in southern mixed chaparral, 4) treated fuels in the fuel modification zones for above average 30 MPH southwest winds. The Tables below include the calculation inputs used in the BEHAVE Plus program which were obtained from project site observations and fuel levels typically observed during the local fire season.

In order to provide wildland fire protection measures for this project, fire behavior parameters were calculated for the hazardous native vegetation/fuels historically located on- and off-site. These calculations will be the basis for recommended fuel modifications for the project site development. The existing on-site and off-site fuels will also be considered in evaluating the wildfire threat to this proposed development.

Normal weather conditions consist of an onshore flow from the southwest 5-10 MPH. This condition has a slightly higher temperature and higher humidity than does a Santa Ana condition. A fire under normal conditions is typically a fuel driven fire. However, wind will also contribute to the rate of spread. A summer fire coming from the southwest would be burning uphill and as a result would threaten the development. The late fire season strong non-typical southwest winds and the late fire season northeast winds (Santa Ana winds) create the dangerous and severe conditions for wildfires as experienced in the 2017 Lilac Fire. Modification and/or elimination of hazardous fuels and the reduction of fuel loading around residences are key to safe “*firewise*” planning.

In order to project the fire behavior benefit for the proposed fuel modifications for the project, worst-case scenarios were used in the modeling system to project fire behavior variables. Scenario 1 is a 60-MPH northeast wind (Santa Ana winds) in the SCAL18 Fuel Model historic fuels and then expected fire behavior in fuels that have been modified (treated) for favorable fire behavior variables within this fuel load. Scenario 2 is a late fire season, strong, non-typical (30-MPH) southwest winds in the SCAL 18 Fuel Model and the expected fire behavior after they have been modified (treated) for favorable fire behavior variables within this fuel load. After the fuel modification zone is treated, the fuels would most resemble a GS1 Fuel Model. After the heavier vegetation is removed or thinned (Zone 2), open areas tend to allow finer fuels such as annual grass and low herbaceous plants into the area. In this fuel model, the fire is carried by a grass and low shrubs combined thus lowering the fire intensity and flame length. This treatment would result in reducing the vegetation cover down to 50%, removing dead material and lowering the vertical height of the vegetation.

The worst-case climate parameters and assumptions used for the fire behavior modeling process were as follows:

1. 1-Hour Fine Fuel Moisture 2%
2. 10-Hour Fuel Moisture 3%
3. 100-Hour Fuel Moisture 5%
4. Live Herbaceous Fuel Moisture 30%
5. Live Fuel Moisture 50%

Other site characteristics used for Fire Behavior modeling are as follow:

Slopes. The range of on-site site slopes will change when the final grading is completed for the development. The representative slope used with the fire behavior model for the slopes prior to development is 30 percent on the eastern portion and 25 percent in the western portion.

Fuel Models. The majority of the on-site and off-site fuels is Coastal sage scrub/buckwheat (SCAL 18) and a light annual grass fuel model (GR2), and will be used to represent the native vegetation predominately and historically found both on-site and off-site. The historic native fuels on the project site have been modified significantly by past agricultural activity. As stated earlier, 60% of the vegetation on the subject property is considered a moderate-high fire hazard fuel bed.

Fire Behavior Predictions using BehavePlus 5.0.5

Fire Behavior Summary Tables. The two worst case fire scenario behavior calculations are summarized in Table 1 and 2, including the reduction in flame length that fuel treatment in Thinning Zone 2 will provide.

Table 1 – Fire Scenario 1 Summary

Fire Scenario 1 – 60 MPH Northeast Wind, in Coastal sage scrub (SCAL18)		
Wildland Fire threat to the East side of the Ocean Breeze Ranch		
<u>Prior to Fuel Treatment</u>	VS.	<u>After Fuel Treatment in 100' Fuel Mod Zone</u>
SCAL18 Fuel Model		Converts to a Grass-Shrub Fuel Model (GS1)
Rate of Spread: 280.6 ft. /min		Rate of Spread: 244.4 ft. /min
Fire line Intensity: 20,383 BTU/ft./sec		Fire line Intensity: 1,535 BTU/ft./sec
Flame Length: 43.2 Feet		Flame Length: 13.1 Feet

Table 2 – Fire Scenario 2 Summary

Fire Scenario 2 – 30 MPH Southwest Wind, in Coastal sage scrub (SCAL18)		
Wildland Fire Threat to the West side of Ocean Breeze Ranch		
<u>Prior to Fuel Treatment</u>	VS.	<u>After Fuel Treatment in the 100' Fuel Mod Zone</u>
SCAL18 Fuel Model		Converts to a Grass-Shrub Fuel Model (GS1)
Rate of Spread: 53.8 ft. /min		Rate of Spread: 46.8 ft. /min
Fire line Intensity: 3,906 BTU/ft./sec		Fire line Intensity: 294 BTU/ft./sec
Flame Length: 20.2 Feet		Flame Length: 6.1 Feet

4.7 Defensible Space and Vegetation Management

As required by the 2016 California Fire Code and the 2017 County Consolidated Fire Code, all residential development located within high fire hazard areas shall have a fuel modification zone of 100' around each residential dwelling. The 100' fuel modification zone shall consist of a **Zone 1** - first 50' from structure to be irrigated landscape. **Zone 2** - from 50-100' from structure, thinning the native vegetation to 50% cover is required. Hardscape surfaces such as roads, cement walkways, gravel roads/walkways can be used to meet these requirements. All fuel modification work in the individual lots shall be the

responsibility of the homeowner. For the common areas within the Project, the Home Owners Association (HOA) is responsible as outlined in the CCR's.

For the OBR Project, all planning areas have established a 100' Fuel Modification Zone (FMZ) around their development area (See Appendix C – Fuel Modification Zone Map). Within PA-1 and PA-2, the HOA be responsible for fuel modification in all common areas outside the individual lots and all roadside fuel modification zone maintenance. The Fuel Modification Zones shall be accessible from public roads within those planning areas to provide for maintenance by the HOA. A typical BMZ within PA-1 and 2 would be landscaped and irrigated since most of these areas are cut/fill slopes maintained by the HOA. The FMZ plotted on the site plan for the Project represents a Conceptual Fuel Modification Plan because it gives a general location of 100' of allocated area for fuel modification around the outside perimeter of each planning area.

Prescribed Defensible Space (fuel modification zones) will be maintained by the property owners at least annually or more often as needed. Boundaries of fuel modification zones will be clearly and permanently marked. Plans used in the Defensible Space will be from an approved fire-resistant planting materials list that is maintained by County of San Diego, Department of Planning and Land Use.

Open space areas, preserves, and other environmental or culturally sensitive areas shall be identified for the HOA in the CCR's as well as any restrictions and guidance materials.

Zone 1 (irrigated landscape) is comprised of the immediate defensible space around the structure out to 50'. For PAs-1 & 2, this would include the entire lot because of their limited size (5,000 sf. to 6,000 sf.). For most of PA-1 & 2, Zone 2 would be implemented in the FMZ area off-site as a landscaped cut or fill slope and maintained by the HOA.

In PA- 3, all 14 lots are a minimum of 5 acres. These lots should have ample space to implement a Zone 1 and 2 fuel modification area on the property. The FMZ areas in PA-3 will be determined individually when the future landowners purchase the parcel and undergo design of their property. In PA-3, fuel modification will not be performed by the HOA, but rather by individual homeowners.

A landscape plan has been developed for the Project. This plan will need to be reviewed by the NCFPD. The plan will provide a plant list of species to be planted and other information about tree placement, irrigation and slope planting. The review will ensure that those species planted are acceptable to be planted in high fire hazard areas. The Undesirable Plant List issued by the County of San Diego (See APPENDIX H) recommends that none of these plants be placed within 50-feet (or Zone 1) of residential structures. Fallow orchards shall be removed.

Roadside Brushing: All roadways within the Project that abut an area of native vegetation shall be brushed back 20 feet from both sides of the edge of the roadway. This complies with Section 4907.2.1 of the 2017 County Consolidated Fire Code – Fuel Modification of Combustible Vegetation from Sides of Roadways. This treatment shall be required at all public and private roads within the project. The result of such treatment would reduce the vegetation down to a 6” stubble height. Recommended treatment method would be to use brush cutting tools such as weed-whackers, or hand-grubbing applied annually or as needed.

The fuel modification zones along each side of Road A where it crosses through biological open space shall be increased to 30 ft. This enhancement will provide for greater safety to the development by ensuring evacuation routes are not compromised and providing for fire fighter safety.

4.8 Cumulative Impact Analysis

Because of the increase in human population and activities associated with the Project, the added development may increase the potential wildfire risk to the area. Fire ignitions may increase due to the expected rise in vehicle traffic along West Lilac Road and other associated residential activities within the Project in close proximity to a high fire hazard severity area. The OBR development has incorporated all of the features required by the NCFPD to make their community fire wise and fire safe. It is important that the community increase its awareness for fire prevention and maintain clearances around dwellings. Working with a local Fire Safe Councils are great ways for communities to interact with their neighbors to ensure that everyone has been educated on a fire safe environment.

5.0 EVACUATION PLAN

The Evacuation Plan was developed to include both the OBR development and the Equestrian Center.

Primary planned evacuation routes will use Roads A and B, providing connection to West Lilac Road for evacuation from the project in directions farther west. During emergency evacuations, OBR residents would be directed by law enforcement or the Fire Department to exit by way of Roads A & B out to West Lilac Road, with the option to go east or west.

In the event travel to the west is not feasible due to emergency circumstances, an evacuation route has been planned which would allow residents to evacuate to the east. At full project buildout and as described previously in Section 4.2l, the entire length of Dulin Road will be available to residents as an alternate evacuation route to the east. Evacuation routes for the project have been planned to allow for evacuation during the phased construction of the project, as described previously in Section 4.2m. During the

phased construction of the project, the Project Applicant will be required to establish the Interim Evacuation Route (IER) as described previously in Section 4.2n.

The equestrian facility would use its own internal system of roads to connect to Dulin Road and follow traffic out to Old Highway 395. The security gates on Dulin Road would be automatically activated by exiting vehicles, and entrance would be provided through a gate code provided by the HOA to homeowners under emergency circumstances. See APPENDIX D for the evacuation routes planned for OBR and the equestrian facility.

6.0 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

In order to mitigate for potential risk to human health and safety, the Project has agreed to implement and shall complete the following mitigation measures:

- 6.1) The OBR Project design has improved access throughout the development with a system of roads that allow safe and efficient traffic movement.
- 6.2) In order to mitigate for dead end road lengths which would otherwise exceed maximum allowable lengths, the Project shall construct Dulin Road as a private road through Planning Area 3, connecting to the existing public segment of Dulin Road at the Project's eastern boundary.
- 6.3) All planning areas have an established 100' fuel modification zone around the outside perimeter. This buffer provides adequate space to implement a Zone 1 and 2 fuel modification area.
- 6.4) Water supply will allow fire flows to all mains to meet the required 2500 GPM. Security gates in PA-3 will be installed and designed to NCFPD standards to allow safe emergency egress.
- 6.5) The OBR applicant shall define areas of responsibility for the future HOA as well as private lot owners, particularly in regards to responsibility for the 100-foot BMZ zones illustrated on the Project site plan.
- 6.6) The Project shall implement the ignition-resistant construction standards compliant with California Fire Code and Chapter 7A of the California Building Code for all residential structures.

7.0 CONCLUSIONS

The Project has addressed each of the guidelines that determine significant impacts in Chapter 2. The result is that the Project design combined with the fire protection measures applied have effectively reduced the significance level to "less than significant" in accordance with the stated Significance Guidelines. The Evacuation Plan covers both the

OBR development and EC Facility which provides secondary access as required by the NCFPD.

8.0 LIST OF PREPARERS & PERSONS/ORGANIZATIONS CONTACTED

- Ronald Woychak – *FIREWISE 2000, Inc., Certified Fire Protection Planning Consultant* with County of San Diego
- Mel Johnson , *Firewise 2000, Inc. Senior Wildland Fire Associate*
- David C. Bacon, *FIREWISE 2000, Inc., Certified Fire Protection Planning Consultant* with County of San Diego
- Patty Koch – Fire Prevention Specialist, North County Fire Protection District
- Peter Fagrell – Ocean Breeze Project Manager, Helios Property Solutions, LLC
- Mike Cho – Project Architect, TRG Land, Inc.
- Jim Conrad – Ocean Breeze Ranch Development, LLC
- James Pine – Deputy Fire Marshall, San Diego County Fire Authority

TECHNICAL APPENDICES

APPENDIX A – SITE PLAN & PROJECT BOUNDARY FOR OCEAN BREEZE RANCH

APPENDIX B – VEGETATION EXHIBIT

**APPENDIX C – FIRE BEHAVIOR PROJECTIONS/CALCULATIONS & 2017 LILAC
FIRE MAP**

APPENDIX D – EVACUATION PLAN

APPENDIX E – INTERIM EVACUTION ROUTE (IER)

APPENDIX F – OBR PHASING PLAN

APPENDIX G – WATER SERVICE AVAILABILITY FORM 399W

APPENDIX H – FIRE SERVICE AVAILABILITY FORM 399F

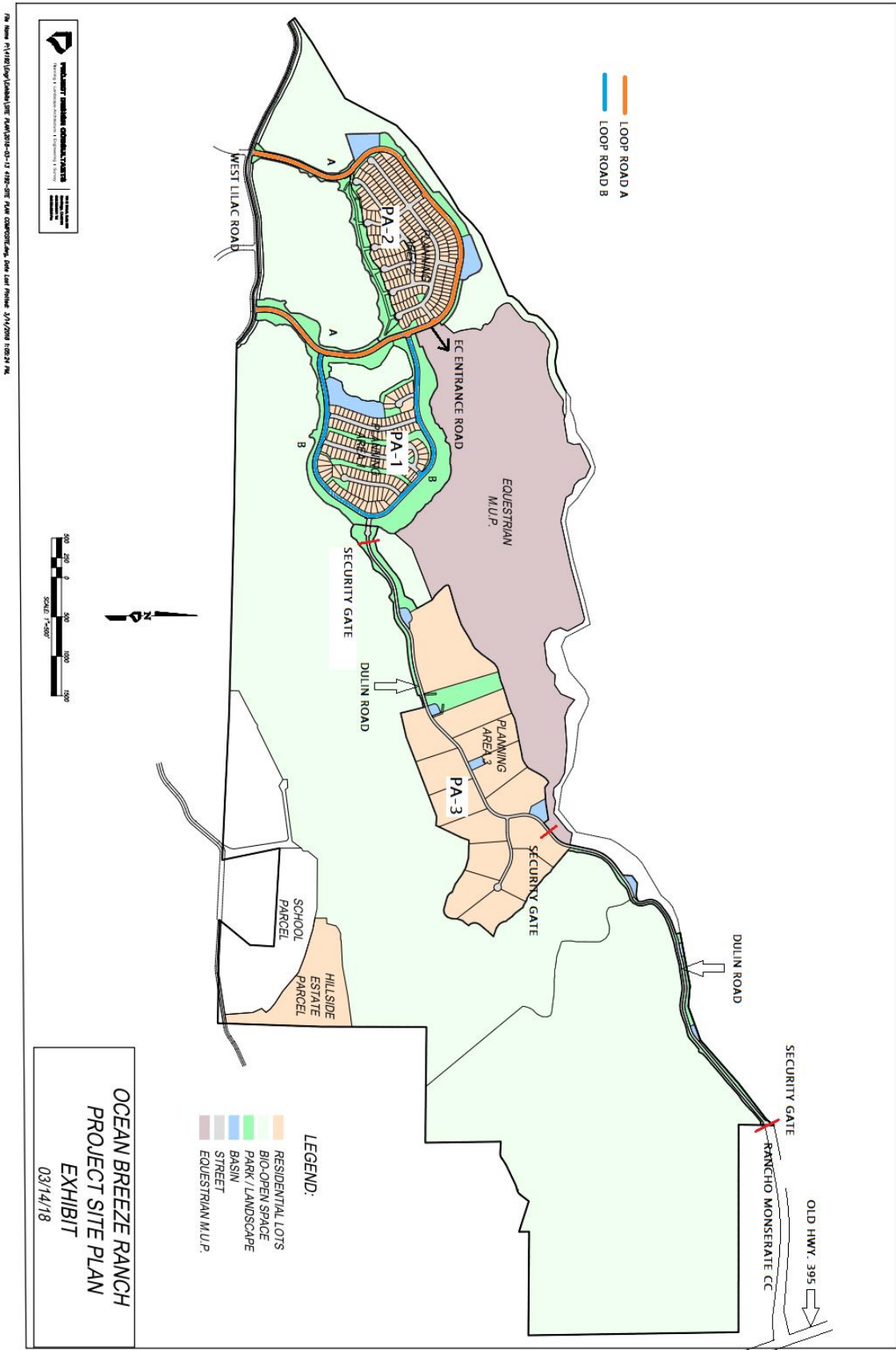
APPENDIX I – SAN DIEGO COUNTY UNDESIRABLE PLANT LIST

APPENDIX J– LITERATURE REFERENCES

APPENDIX K – PROJECT PHOTOS

APPENDIX A

Site Plan & Project Boundary For Ocean Breeze Ranch



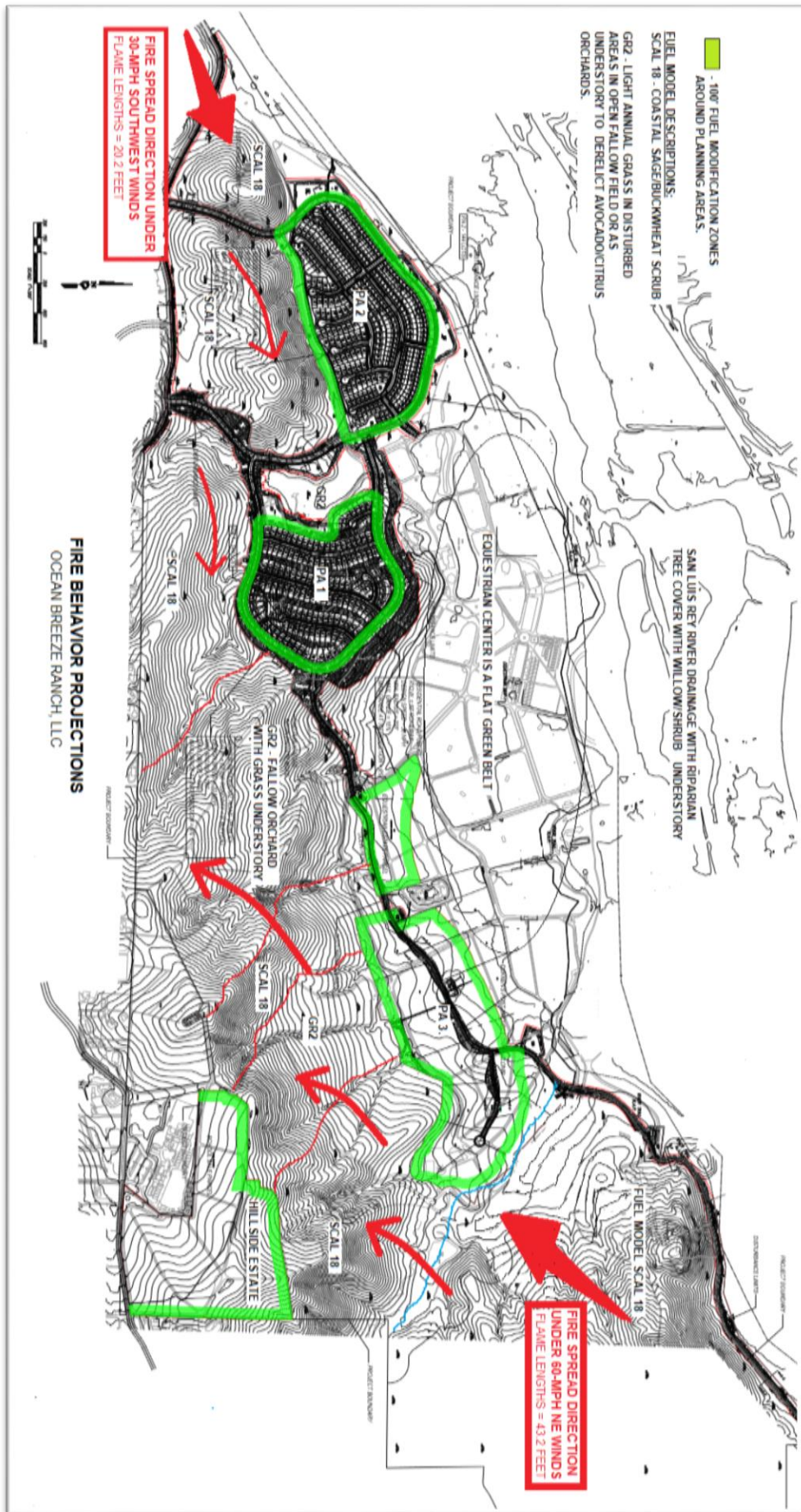
APPENDIX B

Vegetation Exhibit

Provided by Helix Environmental Planning

APPENDIX C

Fire Behavior Projections BehavePlus 5.0.5 Calculations & The 2017 Lilac Fire Map



BehavePlus 5.0.5 (Build 307)
OBR SCAL 18 60mph NE
 Thu, Sep 08, 2016 at 12:08:11

Input Worksheet

Inputs: SURFACE

Input Variables	Units	Input Value(s)
-----------------	-------	----------------

Fuel/Vegetation, Surface/Understory

Fuel Model		SCAL18
------------	--	--------

Fuel Moisture

1-h Moisture	%	2
10-h Moisture	%	3
100-h Moisture	%	5
Live Herbaceous Moisture	%	30
Live Woody Moisture	%	50

Weather

Midflame Wind Speed	mi/h	24
Direction of Wind Vector (from upslope)	deg	180

Terrain

Slope Steepness	%	30
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Fire

Spread Direction (from upslope)	deg	180
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Notes

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are for the specified spread directions [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from upslope [SURFACE].

Direction of the wind vector is the direction the wind is pushing the fire [SURFACE].

Results

Output Variable	Value	Units
Surface Rate of Spread	280.6	ft/min
Fireline Intensity	20383	Btu/ft/s
Flame Length	43.2	ft
Direction of Maximum Spread (from upslope)	180	deg

BehavePlus 5.0.5 (Build 307)

60-MPH NEwindOBR

Thu, Sep 08, 2016 at 11:56:23

Input Worksheet**Inputs: SURFACE**

Input Variables	Units	Input Value(s)
-----------------	-------	----------------

Fuel/Vegetation, Surface/Understory

Fuel Model	gs1	
------------	-----	--

Fuel Moisture

1-h Moisture	%	2
10-h Moisture	%	3
100-h Moisture	%	5
Live Herbaceous Moisture	%	30
Live Woody Moisture	%	50

Weather

Midflame Wind Speed	mi/h	24
Direction of Wind Vector (from upslope)	deg	180

Terrain

Slope Steepness	%	30
-----------------	---	----

Fire

Spread Direction (from upslope)	deg	180
---------------------------------	-----	-----

Notes

This fire behavior run is for treated fuel mod zone that reduces down to a GS1 fuel model (east end).

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are for the specified spread directions [SURFACE].

Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from upslope [SURFACE].

Direction of the wind vector is the direction the wind is pushing the fire [SURFACE].

Results

Output Variable	Value	Units
Surface Rate of Spread	244.4	ft/min
Fireline Intensity	1535	Btu/ft/s
Flame Length	13.1	ft
Direction of Maximum Spread (from upslope)	180	deg

BehavePlus 5.0.5 (Build 307)

30-MPH SWwindOBR

Thu, Sep 08, 2016 at 11:51:46

Input Worksheet**Inputs: SURFACE**

Input Variables	Units	Input Value(s)
-----------------	-------	----------------

Fuel/Vegetation, Surface/Understory

Fuel Model		SCAL18
------------	--	--------

Fuel Moisture

1-h Moisture	%	2
10-h Moisture	%	3
100-h Moisture	%	5
Live Herbaceous Moisture	%	30
Live Woody Moisture	%	50

Weather

Midflame Wind Speed	mi/h	12
Direction of Wind Vector (from upslope)	deg	0

Terrain

Slope Steepness	%	25
-----------------	---	----

Fire

Spread Direction (from upslope)	deg	20
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Notes

This fire behavior run is for SCAL18 upslope fire spread at PA-1, 2 & 3 (west side).

Run Option Notes

Maximum reliable effective wind speed limit IS imposed [SURFACE].

Calculations are for the specified spread directions [SURFACE].

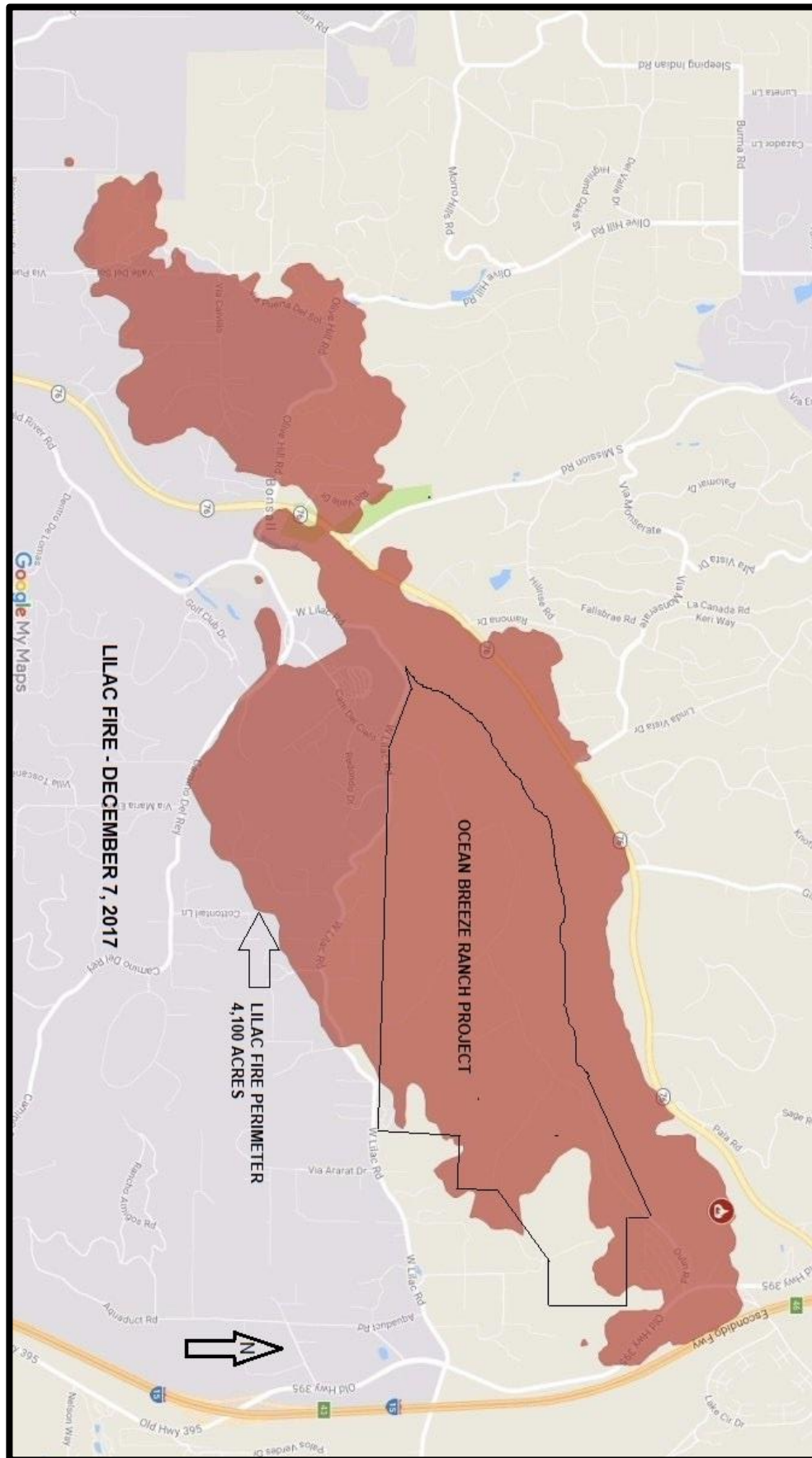
Fireline intensity, flame length, and spread distance are always for the direction of the spread calculations [SURFACE].

Wind and spread directions are degrees clockwise from upslope [SURFACE].

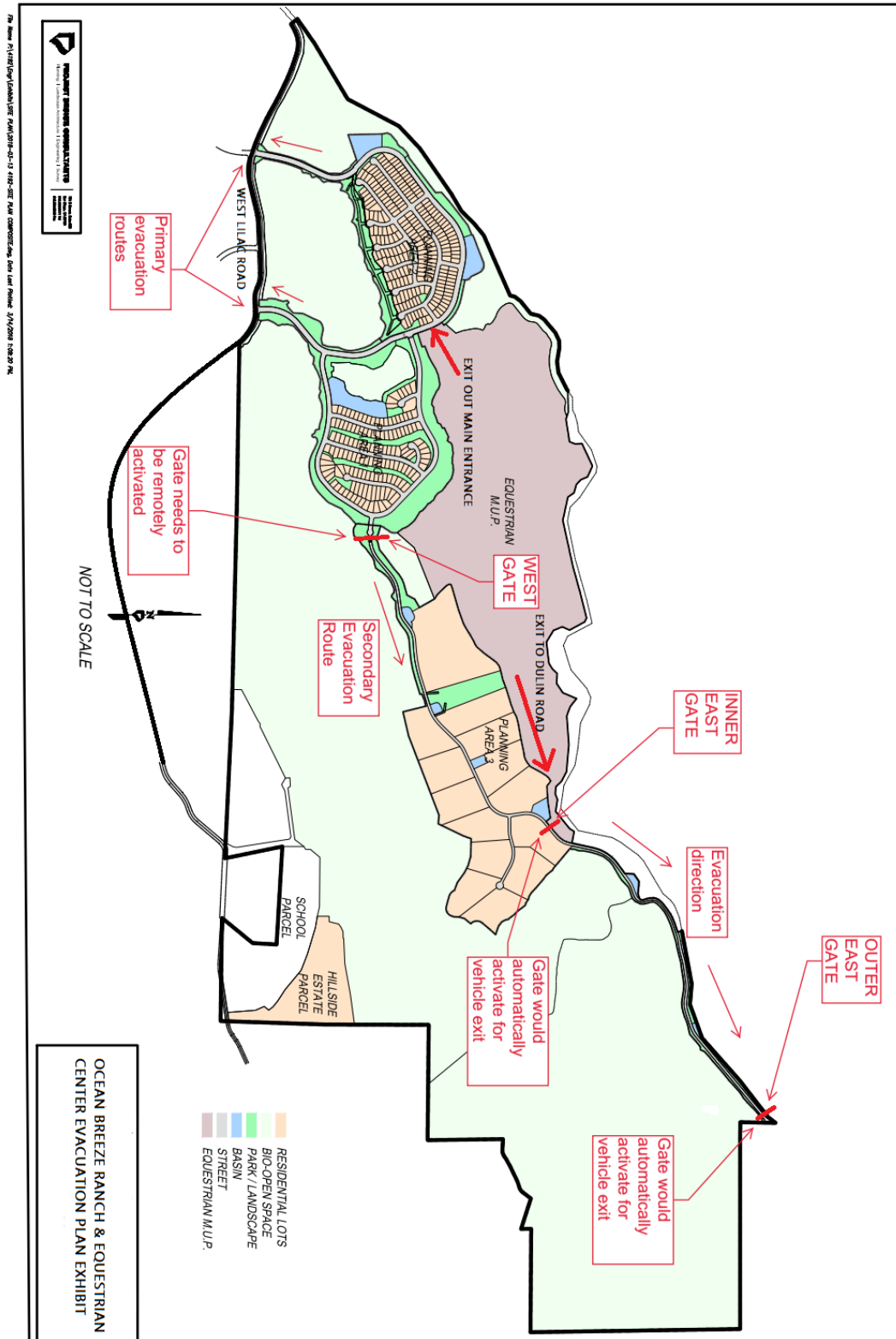
Direction of the wind vector is the direction the wind is pushing the fire [SURFACE].

Results

Output Variable	Value	Units
Surface Rate of Spread	53.8	ft/min
Fireline Intensity	3906	Btu/ft/s
Flame Length	20.2	ft
Direction of Maximum Spread (from upslope)	0	deg



APPENDIX D EVACUATION PLAN

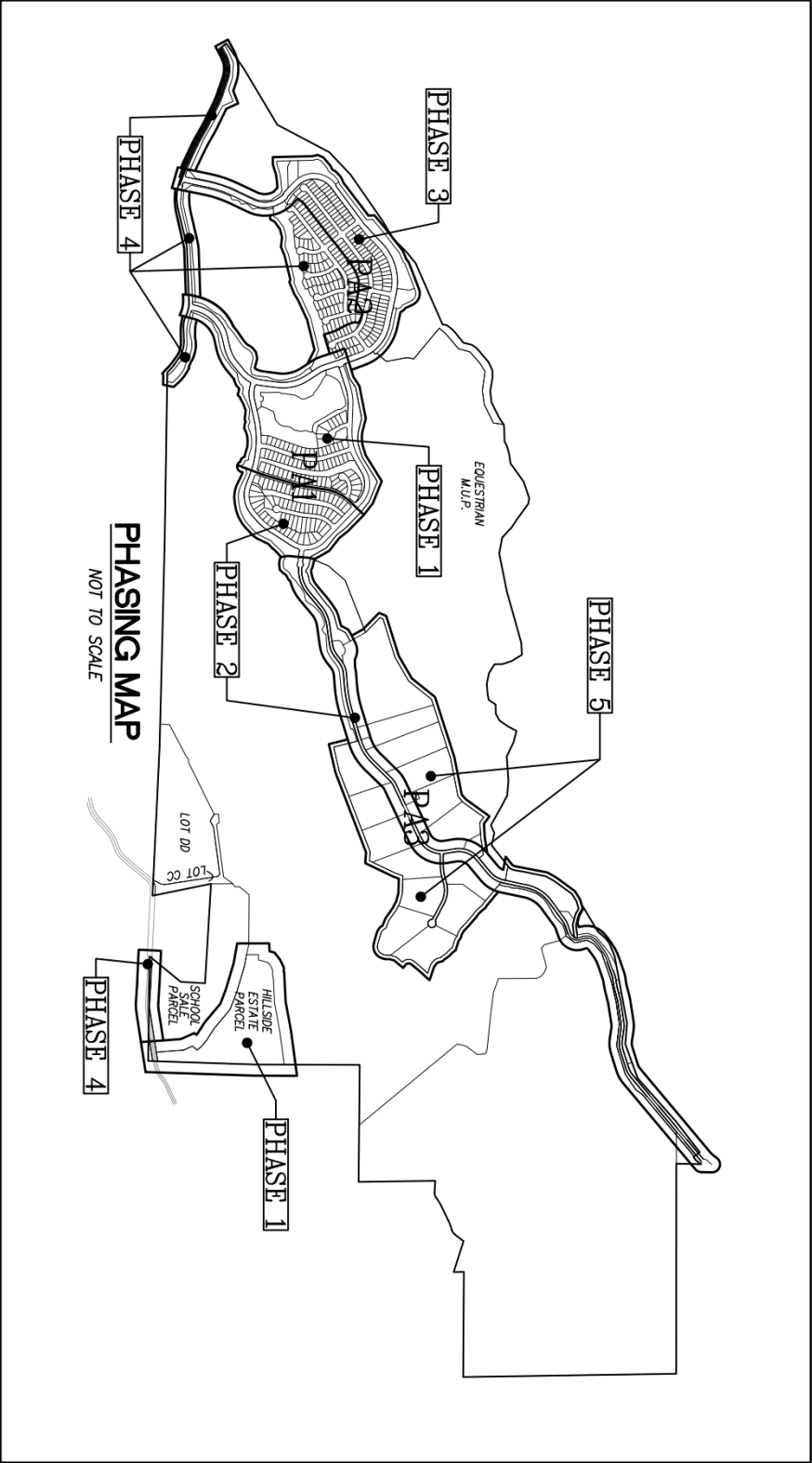


APPENDIX E

INTERIM EVACUATION ROUTE

APPENDIX F

OBR PHASING PLAN



APPENDIX G

Water Service Availability Form 399W



County of San Diego, Planning & Development Services
PROJECT FACILITY AVAILABILITY - WATER
ZONING DIVISION

<i>Please type or use pen</i>			ORG _____	W
Frank N Vessels Family Trust; Attn William Thead, Trustee			ACCT _____	
Owner's Name _____		Phone _____	ACT _____	
5256 So. Mission Road, Suite 204			TASK _____	
Owner's Mailing Address _____		Street _____	DATE <u>9/30/14</u>	
Bonsall	CA	92003	AMT \$ <u>30⁰⁰</u>	
City	State	Zip	DISTRICT CASHIER'S USE ONLY	

SECTION 1. PROJECT DESCRIPTION

TO BE COMPLETED BY APPLICANT

- A. ☒ Major Subdivision (TM) ☐ Specific Plan or Specific Plan Amendment
☐ Minor Subdivision (TPM) ☐ Certificate of Compliance:
☐ Boundary Adjustment
☐ Rezone (Reclassification) from _____ to _____ zone.
☐ Major Use Permit (MUP), purpose: _____
☐ Time Extension... Case No. _____
☐ Expired Map... Case No. _____
☐ Other _____
- B. ☒ Residential Total number of dwelling units 400
☐ Commercial Gross floor area _____
☐ Industrial Gross floor area _____
☐ Other Gross floor area _____
- C. ☐ Total Project acreage 1400 Total number of lots 400
- D. Is the project proposing the use of groundwater? ☐ Yes ☒ No
Is the project proposing the use of reclaimed water? ☐ Yes ☒ No

Assessor's Parcel Number(s)
(Add extra if necessary)

See exhibit

attached

Thomas Guide Page _____ Grid _____
5820 W Lilac Road
Project address _____ Street _____
Bonsall _____ 92003
Community Planning Area/Subregion _____ Zip _____

Owner/Applicant agrees to pay all necessary construction costs, dedicate all district required easements to extend service to the project and
COMPLETE ALL CONDITIONS REQUIRED BY THE DISTRICT.

Applicant's Signature: William Thead, Trustee

Date: 9/5/14

Address: 5256 So. Mission Road, Suite 204; Bonsall, CA 92003

Phone: (760) 414-3220

(On completion of above, present to the district that provides water protection to complete Section 2 below.)

SECTION 2: FACILITY AVAILABILITY

TO BE COMPLETED BY DISTRICT

- District Name: Rainbow Municipal Water District Service area: Bonsall
- A. ☒ Project is in the district.
☐ Project is not in the district but is within its Sphere of Influence boundary, owner must apply for annexation.
☐ Project is not in the district and is not within its Sphere of Influence boundary.
☐ The project is not located entirely within the district and a potential boundary issue exists with the _____ District.
- B. ☒ Facilities to serve the project ☒ ARE ☐ ARE NOT reasonably expected to be available within the next 5 years based on the capital facility plans of the district. Explain in space below or on attached _____. (Number of sheets) _____
☐ Project will not be served for the following reason(s): _____
- C. ☒ District conditions are attached. Number of sheets attached: 1
☐ District has specific water reclamation conditions which are attached. Number of sheets attached: _____
☐ District will submit conditions at a later date.
- D. ☒ How far will the pipeline(s) have to be extended to serve the project? TBD

This Project Facility Availability Form is valid until final discretionary action is taken pursuant to the application for the proposed project or until it is withdrawn, unless a shorter expiration date is otherwise noted.

Authorized Signature: Sherry Rehena Print Name: Sherry Rehena
Print Title: Acting District Engineer Phone: (760) 728-1178 Date: 9/16/14

NOTE: THIS DOCUMENT IS NOT A COMMITMENT OF SERVICE OR FACILITIES BY THE DISTRICT
On completion of Section 2 and 3 by the District, applicant is to submit this form with application to:
Planning & Development Services - Zoning Counter, 5510 Overland Ave, Suite 110, San Diego, CA 92123



September 30, 2014

Planning & Development Services
5510 Overland Ave. Suite 110
San Diego, CA 92123

Subject: Conditions for APN 126-060-78, 124-150-28, 127-191-20, 127-230-59, 127-271-02, 125-131-49, 127-271-01, 124-150-35, 124-131-48, 125-131-54, 125-080-21 and 124-150-34, Vessels DPLU 399W and 399S

To Whom It May Concern:

C. Rainbow Municipal Water District (District) conditions regarding the parcel referenced above are as follows:

1. Facilities must be extended to serve all parcels of the development and all work must conform to the current District standards and specifications
2. District must be at a Drought Level 2 or lower in order to supply water meters or development must prove an offset of water per District Drought Ordinance
3. Development may be required to upsize sewer lines to accommodate flows and pay additional fees to fund sewer upsizing projects impacted by the development
4. If the District does not have adequate capacity to treat sewer per the contract with the San Luis Rey Treatment Plant, development must pay to increase the treatment capacity

3707 Old Highway 395 • Fallbrook, CA 92028-2500
Phone: (760) 728-1178 • Fax: (760) 728-2575 • www.rainbowmwd.com

APPENDIX H

Fire Service Availability Form 399F



County of San Diego, Planning & Development Services
PROJECT FACILITY AVAILABILITY - FIRE
ZONING DIVISION

Please type or use pen		F
Frank N Vessels Family Trust Attn William Thead		ORG _____
Owner's Name	Phone	ACCT _____
5256 So. Mission Road, Suite 204	(760) 414-3220	ACT _____
Owner's Mailing Address	Street	TASK _____
Bonsall	CA 92003	DATE _____ AMT \$ _____
City	State Zip	DISTRICT CASHIER'S USE ONLY

SECTION 1. PROJECT DESCRIPTION

TO BE COMPLETED BY APPLICANT

- A. ☒ Major Subdivision (TM) ☐ Specific Plan or Specific Plan Amendment
☐ Minor Subdivision (TPM) ☐ Certificate of Compliance: _____
☐ Boundary Adjustment
☐ Rezone (Reclassification) from _____ to _____ zone.
☐ Major Use Permit (MUP), purpose: _____
☐ Time Extension... Case No. _____
☐ Expired Map... Case No. _____
☐ Other _____
- B. ☒ Residential Total number of dwelling units 400
☐ Commercial Gross floor area _____
☐ Industrial Gross floor area _____
☐ Other Gross floor area _____
- C. Total Project acreage 1400 Total lots 400 Smallest proposed lot 6000

Assessor's Parcel Number(s)
 (Add extra if necessary)

See exhibit	
attached	

Thomas Guide. Page _____ Grid _____
 5820 W Lilac Rd
 Project address _____ Street _____
 Bonsall _____ 92003
 Community Planning Area/Subregion _____ Zip _____

OWNER/APPLICANT AGREES TO COMPLETE ALL CONDITIONS REQUIRED BY THE DISTRICT.

Applicant's Signature: William Thead Date: 9/5/14
 Address: 5256 So. Mission Road, Suite 204; Bonsall, CA 92003 Phone: (760) 414-3220
 (On completion of above, present to the district that provides fire protection to complete Section 2 and 3 below.)

SECTION 2: FACILITY AVAILABILITY

TO BE COMPLETED BY DISTRICT

- District Name: North County Fire Protection District
 Indicate the location and distance of the primary fire station that will serve the proposed project:
5906 Olive Hill Rd Fallbrook CA Approx 6 miles
- A. ☒ Project is in the District and eligible for service.
☐ Project is not in the District but is within its Sphere of Influence boundary, owner must apply for annexation.
☐ Project is not in the District and not within its Sphere of Influence boundary.
☐ Project is not located entirely within the District and a potential boundary issue exists with the _____ District.
- B. ☒ Based on the capacity and capability of the District's existing and planned facilities, fire protection facilities are currently adequate or will be adequate to serve the proposed project. The expected emergency travel time to the proposed project is 10-15 minutes minutes.
☐ Fire protection facilities are not expected to be adequate to serve the proposed development within the next five years.
- C. ☐ District conditions are attached. Number of sheets attached: _____
☒ District will submit conditions at a later date. A FPP will be required

SECTION 3. FUELBREAK REQUIREMENTS

Note: The fuelbreak requirements prescribed by the fire district for the proposed project do not authorize any clearing prior to project approval by Planning & Development Services.

- ☒ Within the proposed project _____ feet of clearing will be required around all structures.
 The proposed project is located in a hazardous wildland fire area, and additional fuelbreak requirements may apply. Environmental mitigation requirements should be coordinated with the fire district to ensure that these requirements will not pose fire hazards.

This Project Facility Availability Form is valid until final discretionary action is taken pursuant to the application for the proposed project or until it is withdrawn, unless a shorter expiration date is otherwise noted.

Authorized Signature: Dottie Koch Print Name and Title: Dottie Koch FPS Phone: 760 723 2040 Date: 9-18-14

On completion of Section 2 and 3 by the District, applicant is to submit this form with application to:
 Planning & Development Services - Zoning Counter, 5510 Overland Ave, Suite 110, San Diego, CA 92123

APPENDIX I

San Diego County Undesirable Plant List

UNDESIRABLE PLANT LIST

The following species are highly flammable and should be avoided when planting within the first 50 feet adjacent to a structure. The plants listed below are more susceptible to burning, due to rough or peeling bark, production of large amounts of litter, vegetation that contains oils, resin, wax, or pitch, large amounts of dead material in the plant, or plantings with a high dead to live fuel ratio.

<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>
<u>Abies species</u>	Fir Trees
<u>Acacia species</u> groundcovers)	Acacia (trees, shrubs,
<u>Adenostoma sparsifolium**</u>	Red Shanks
<u>Adenostoma fasciculatum**</u>	Chamise
<u>Agonis juniperina</u>	Juniper Myrtle
<u>Anthemis cotula***</u>	Mayweed, Stinking Chamomile
<u>Araucaria species</u>	Monkey Puzzle, Norfolk Island Pine
<u>Arctostaphylos species**</u>	Manzanita
<u>Artemesia californica**</u>	California Sagebrush
<u>Arundo donax</u>	Giant Cane
<u>Bambusa species</u>	Bamboo
<u>Brassica species***</u>	Mustard
<u>Callistemon species</u>	Bottlebrush
<u>Calocedrus decurrens</u>	Incense Cedar
<u>Cardaria draba***</u>	Hoary Cress, Perennial
Peppergrass	
<u>Ceanothus species</u>	Ceanothus
<u>Cedrus species</u>	Cedar
<u>Chamaecyparis species</u>	False Cypress
<u>Cinnamomum species</u>	Camphor Tree
<u>Cirsium vulgare***</u>	Wild Artichoke
<u>Conyza Canadensis***</u>	Horseweed
<u>Coprosma pumila</u>	Prostrate Coprosma
<u>Cortaderia selloana</u>	Pampas Grass
<u>Cotoneaster lacteus</u>	Cotoneaster
<u>Cryptomeria japonica</u>	Japanese Cryptomeria
<u>Cupressocyparis leylandii</u>	Leylandii Cypress
<u>Cupressus forbesii</u>	Tecate Cypress
<u>Cupressus glabra</u>	Arizona Cypress
<u>Cupressus macrocarpa</u>	Monterey Cypress
<u>Cupressus sempervirens</u>	Italian Cypress
<u>Cynara cardunculus***</u>	Artichoke Thistle
<u>Cytisus species</u>	Scotch Broom, French
Broom, etc.	
<u>Dodonea viscosa</u>	Hopseed Bush

Elaeagnus angustifolia
Elaeagnus pungens
Eriogonum fasciculatum**
Eucalyptus species
Gensita species***
Heterotheca grandiflora**
Jubaea chilensis
Juniperus species
Lactuca serriola***
Larix species
Lonicera japonica
Miscanthus species
Muehlenbergia species**
Nicotiana species
Palmae species
Pennisetum setaceum
Picea species
Pickeringia Montana**
Pinus species
Podocarpus species
Pseudotsuga menziesii
Ricinus communis
Rosmarinus species
Salsola australis***
Salvia species**
Schinus molle
Schinus terebinthifolius
Silybum marianum***
Spartium junceum
Tamarix species
Taxodium species
Taxus species
Thuja species
Trachycarpus fortunei
Tsuga species
Ulex europea***
Urtica urens**
Washingtonia species
 Palm

Russian Olive
 Silverberry
 Common Buckwheat
 Eucalyptus
 Broom
 Telegraph Plant
 Chilean Wine Palm
 Junipers
 Prickly Lettuce
 Larch
 Japanese Honeysuckle
 Eulalia Grass
 Deer Grass
 Tree Tobacco
 Palms
 Fountain Grass
 Spruce Trees
 Chaparral Pea
 Pines
 Fern Pine
 Douglas Fir
 Castor Bean
 Rosemary
 Russian Thistle, Tumbleweed
 Sage
 California Pepper
 Brazilian Pepper
 Milk Thistle
 Spanish Broom
 Tamarisk
 Cypress
 Yew
 Arborvitae
 Windmill Palm
 Hemlock
 Gorse
 Burning Nettle
 California/Mexican Fan

** San Diego County native species
 *** Introduced weeds to San Diego County

California Department of Forestry and Fire Protection (619) 590-3100
United States Forest Service (619) 674-2901
County Fire Service Coordinator (858) 495-5092
County Farm and Home Advisor (858) 694-2845
Insurance Information Network of California -- Brochures

(www.iinc.org <<http://www.iinc.org>>) or call (800) 397-1679

REFERENCES

- Combustible Vegetation and Other Flammable Materials Ordinance. Sections 68.401 thru 86.406 of the County of San Diego's Zoning Ordinance.
- California Department of Fish and Game (858) 467-4201
- U.S. Fish and Wildlife Service (760) 431-9440
- Protecting Your Property From Soil Erosion
(www.sdcounty.ca.gov/dpw/docs/fire/homeerosion.pdf
<<http://www.sdcounty.ca.gov/dpw/docs/fire/homeerosion.pdf>>)
- Homeowner's Guide for Flood, Debris, and Erosion Control After Fires
(www.sdcounty.ca.gov/dpw/docs/fire/AfterFire.pdf
<<http://www.sdcounty.ca.gov/dpw/docs/fire/AfterFire.pdf>>)
- Burn Institute (www.burninstitute.org)

APPENDIX J

Literature References

1. Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model, General Technical Report RMRS-GTR-153. June 2005. Joe H. Scott, Robert E. Burgan, United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.
2. BEHAVEPlus: Fire Modeling System, version 5.0.5: Variables. General Technical Report RMRS-GTR-213WWW Revised. September 2009. Patricia L. Andrews, United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.
3. BEHAVEPlus Fire Modeling System, Version 5.0.0 General Technical Report RMRS-GTR-106WWW Revised. June 2008. Patricia L. Andrews, Collin D. Bevins and Robert C. Seli. United States Department of Agriculture - Forest Service, Rocky Mountain Research Station, Missoula, Montana.
4. California Code of Regulations, Title 14, section 1280; California Public Resources Codes sections 4201 through 4204
5. California Government Code, sections 51175 through 51189
6. 2016 Fire Code portion of the CBSC, including appendices to Chapters 1 & 4 and appendices B, F & H
7. The 2016 California Fire Code with and adopted Local Amendments.
8. The 2016 California Residential Code, Section R327.
9. Chapter 7A-2016 California Building Code
10. National Fire Protection Association - NFPA 13 Standard for the Installation of Sprinkler Systems in One – and Two-Family Dwellings and Manufactured Homes, 13-R & 13-D, 2013 Editions
11. National Fire Protection Association - NFPA 1144 *Standard for Reducing Structure Ignition Hazards from Wildfire* (2013).
12. National Fire Protection Association - NFPA 1142, 2012 Edition. Table C.11 (b) Time-Distance Table Using an Average Speed of 30 mph
13. International Urban-Wildland Interface Code, 2012 Edition
14. *The California State and Local Responsibility Area Fire Hazard Severity Zone Map – Fire and Resource Assessment Program of CAL FIRE*
15. County of San Diego 2017 Consolidated Fire Code with local amendments.
16. North County Fire Protection District Ordinance 2016-02, adopting the 2016 California Fire Code with certain amendments, additions and deletions.

APPENDIX K

PROJECT PHOTOS



PHOTO 3. VIEW FROM TOP OF PA 1 LOOKING NORTHEAST DOWN AT EQUESTRIAN CENTER.



PHOTO 4. VIEW LOOKING SOUTH FROM PA 3.



PHOTO 5. VIEW LOOKING SOUTH FROM CENTER OF PA 1 AT OPEN SPACE AREA ON THE HILL.



PHOTO 6. VIEW LOOKING SOUTHWEST FROM DULIN ROAD AT EAST END OF PA 3.



PHOTO 7. VIEW LOOKING EAST FROM DULIN ROAD (FAR EAST SIDE OF PROJECT).

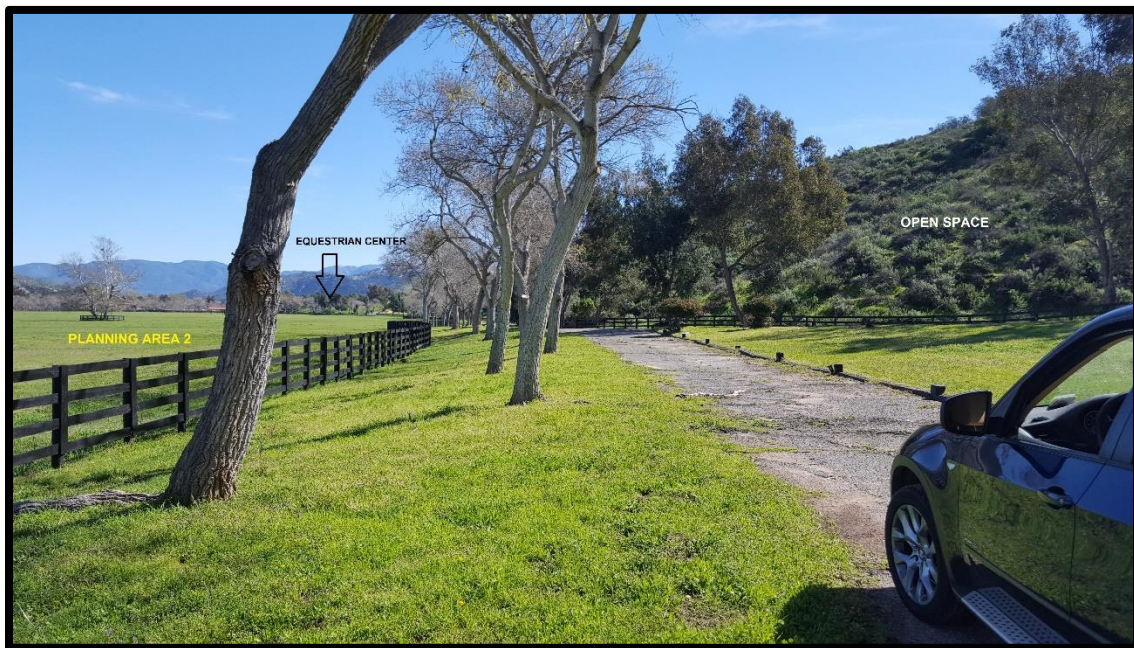


PHOTO 8. VIEW LOOKING EAST FROM ENTRANCE ROAD INTO PA 2.